

Display panel means a panel that is entirely or partially comprised of glass, a transparent material, or both and is used for display purposes.

Door means an assembly installed in an opening on an interior or exterior wall that is used to allow access or close off the opening and that is movable in a sliding, pivoting, hinged, or revolving manner of movement. For walk-in coolers and walk-in freezers, a door includes the door panel, glass, framing materials, door plug, mullion, and any other elements that form the door or part of its connection to the wall.

Envelope means—

(1) The portion of a walk-in cooler or walk-in freezer that isolates the interior, refrigerated environment from the ambient, external environment; and

(2) All energy-consuming components of the walk-in cooler or walk-in freezer that are not part of its refrigeration system.

K-factor means the thermal conductivity of a material.

Manufacturer of a walk-in cooler or walk-in freezer means any person who:

(1) Manufactures a component of a walk-in cooler or walk-in freezer that affects energy consumption, including, but not limited to, refrigeration, doors, lights, windows, or walls; or

(2) Manufactures or assembles the complete walk-in cooler or walk-in freezer.

Panel means a construction component that is not a door and is used to construct the envelope of the walk-in, i.e., elements that separate the interior refrigerated environment of the walk-in from the exterior.

Refrigerated means held at a temperature at or below 55 degrees Fahrenheit using a refrigeration system.

Refrigeration system means the mechanism (including all controls and other components integral to the system's operation) used to create the refrigerated environment in the interior of a walk-in cooler or freezer, consisting of:

(1) A packaged dedicated system where the unit cooler and condensing unit are integrated into a single piece of equipment; or

(2) A split dedicated system with separate unit cooler and condensing unit sections; or

(3) A unit cooler that is connected to a multiplex condensing system.

U-factor means the heat transmission in a unit time through a unit area of a specimen or product and its boundary air films, induced by a unit temperature difference between the environments on each side.

Walk-in cooler and walk-in freezer mean an enclosed storage space refrigerated to temperatures, respectively, above, and at or below 32 degrees Fahrenheit that can be walked into, and has a total chilled storage area of less than 3,000 square feet; however the terms do not include products designed and marketed exclusively for medical, scientific, or research purposes.

[74 FR 12074, Mar. 23, 2009, as amended at 76 FR 12504, Mar. 7, 2011; 76 FR 21604, Apr. 15, 2011; 76 FR 33631, June 9, 2011]

TEST PROCEDURES

§ 431.303 Materials incorporated by reference.

(a) *General.* We incorporate by reference the following standards into subpart R of part 431. The material listed has been approved for incorporation by reference by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Any subsequent amendment to a standard by the standard-setting organization will not affect the DOE regulations unless and until amended by DOE. Material is incorporated as it exists on the date of the approval and a notice of any change in the material will be published in the FEDERAL REGISTER. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. Also, this material is available for inspection at U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, 6th Floor, 950 L'Enfant Plaza, SW., Washington, DC 20024, 202-586-2945, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays, or go to: <http://www1.eere.energy.gov/buildings/>

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appliance standards/. Standards can be obtained from the sources listed below.

(b) *AHRI*. Air-Conditioning, Heating, and Refrigeration Institute, 2111 Wilson Boulevard, Suite 500, Arlington, VA 22201, (703) 600-0366, or <http://www.ahrinet.org>.

(1) AHRI 1250 (I-P)-2009, (“AHRI 1250”), 2009 Standard for Performance Rating of Walk-In Coolers and Freezers, approved 2009, IBR approved for § 431.304.

(2) [Reserved]

(c) *ASTM*. American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, (610) 832-9500, or <http://www.astm.org>.

(1) ASTM C518-04 (“ASTM C518”), Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus, approved May 1, 2004, IBR approved for § 431.304 and appendix A to subpart R of part 431.

(2) ASTM C1363-05, (“ASTM C1363”), Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus, approved May 1, 2005, IBR approved for appendix A to subpart R of part 431.

(d) *CEN*. European Committee for Standardization (French: Norme or German: Norm), Avenue Marnix 17, B-1000 Brussels, Belgium, Tel: + 32 2 550 08 11, Fax: + 32 2 550 08 19 or <http://www.cen.eu/>.

(1) DIN EN 13164:2009-02, (“DIN EN 13164”), Thermal insulation products for buildings—Factory made products of extruded polystyrene foam (XPS)—Specification, approved February 2009, IBR approved for appendix A to subpart R of part 431.

(2) DIN EN 13165:2009-02, (“DIN EN 13165”), Thermal insulation products for buildings—Factory made rigid polyurethane foam (PUR) products—Specification, approved February 2009, IBR approved for appendix A to subpart R of part 431.

(e) *NFRC*. National Fenestration Rating Council, 6305 Ivy Lane, Ste. 140, Greenbelt, MD 20770, (301) 589-1776, or <http://www.nfrc.org/>.

(1) NFRC 100-2010[E0A1], (“NFRC 100”), Procedure for Determining Fenestration Product U-factors, approved

June 2010, IBR approved for appendix A to subpart R of part 431.

(2) [Reserved]

[74 FR 12074, Mar. 23, 2009, as amended at 76 FR 21605, Apr. 15, 2011; 76 FR 33631, June 9, 2011]

§ 431.304 Uniform test method for the measurement of energy consumption of walk-in coolers and walk-in freezers.

(a) *Scope*. This section provides test procedures for measuring, pursuant to EPCA, the energy consumption of refrigerated bottled or canned beverage vending machines.

(b) *Testing and Calculations—EISA 2007 Test Procedure*. Manufacturers shall use this paragraph (b) for the purposes of certifying compliance with the applicable energy conservation standards of the R-value of panels until January 1, 2015.

(1) The R value shall be the 1/K factor multiplied by the thickness of the panel.

(2) The K factor shall be based on ASTM C518 (incorporated by reference, see § 431.303).

(3) For calculating the R value for freezers, the K factor of the foam at 20 degrees Fahrenheit (average foam temperature) shall be used.

(4) For calculating the R value for coolers, the K factor of the foam at 55 degrees Fahrenheit (average foam temperature) shall be used.

(5) Foam shall be tested after it is produced in its final chemical form. Foam produced inside of a panel (“foam-in-place”) must be tested in its final foamed state and must not include any structural members or non-foam materials other than the panel’s protective skins or facers. A test sample less than or equal to 4 inches thick must be taken from the center of the foam-in-place panels. Foam produced as board stock may be tested prior to its incorporation into a final panel.

(6) Manufacturers are not required to consider non-foam member and/or edge regions in ASTM C518 testing.

(c) *Testing and Calculations—Amended Test Procedures*. Manufacturers shall use this paragraph (c) for any representations of energy efficiency/energy use